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ABSTRACT

Increasing periodical prices are creating imbalances in library budgets. A study at Kearney State College was undertaken in 1976 to show that it is possible to predict the effect on the budget of any decision to add or drop subscriptions. Periodical lists were divided into departmental subscriptions which were circulated among faculty for input. This list allowed analysis of the effect yearly department subscriptions would have on a budget over a five year period. Formulas used for the analysis are included as are projected price increases through 1980. (AP)

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A Methodology for Decision-Making in Serials

by

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A Methodology for Decision-Making in Serials

A comparison of the consumer price index with the price indexes for books and periodicals, the latter from figures published by Library Journal, indicates that the library world is suffering from a "runaway inflation" in periodical prices, which are increasing at a faster rate than either book prices or consumer prices as a whole. This phenomenal growth in subscription costs is causing great imbalances in library budgets throughout the world, and is also creating decision-making problems for library managers, who have difficulty in determining the long-term effects of adding or dropping subscriptions for their libraries.

A study conducted at Kearney State College in 1976 showed that it is possible to predict the effect on a library budget of any decision to add a new title to the list of subscriptions, or to remove a periodical from current expenditures. Faced with a nearly-static budget, and rising costs, it was decided to break down the periodical lists into "departmental subscriptions" through the generation of computer-printed subject listings, which were then circulated among the faculty for their input. This list allowed the analysis of the effect that each department's subscriptions would have on the library budget for a five-year period, through the calculation of an average rate of inflation for each discipline, using Library Journal figures. For example, if a subject area was shown to have had an inflation rate of 16% for one year, 14% for another year, and 15% for a third, the arithmetic mean of 15% was used in the calculations.

A simple formula was used to illustrate the cumulative effect of a department's subscriptions:

$X_2 = X_1 + (I * X_1)$, where X_1 is the amount actually spent for the department's subscriptions during the base year, and I represents the inflation rate prevalent for that discipline on a yearly basis. For future years, the formula becomes $X_3 = X_2 + (I * X_2)$, and so forth. The same formula was applied to book expenditures for the same discipline, with a change in the inflation rate appropriate for books in the same area of study. In the following example, an assumption was made that funding for an 8% yearly price rise in books would be available, although this assumption could be changed to reflect other situations:

Dept:

Periodical expenditures for 1976 = 2201.80
 Percent of price increase per year = 15%

Projected price increases through 1980 (P):

	<u>1976</u> 2201.80	<u>1977</u> 2532.07	<u>1978</u> 2911.88	<u>1979</u> 3348.66	<u>1980</u> 3850.96
$\Delta P = 0$		330.27	379.81	436.78	502.30
$\Sigma \Delta P = 0$		330.27	710.08	1146.86	1649.16

Book allocations for 1976 = 4033
 Percent of price rise for books = 8%

Projected book allocations through 1980, based on 1976 allocation (B):

	<u>1976</u> 4033	<u>1977</u> 4355	<u>1978</u> 4704	<u>1979</u> 5080	<u>1980</u> 5486
$\Delta B = 0$		322	349	376	406
$\Sigma \Delta B = 0$		322	671	1047	1453
$(\Sigma \Delta P) - (\Sigma \Delta B) =$		<u>8.27</u>	<u>39</u>	<u>99</u>	<u>196</u>

Note the figures in the chart for A P and A B, which represent changes in funding on a yearly basis to maintain the status quo, and the summation of these increases. Even though the total amount allocated for periodicals was lower than that for books, the inflationary increases over a five year period far exceed forseen funding, leaving a net deficit of \$196.00. The ability to calculate this deficit allows the librarian a five-year opportunity to attempt to rectify the situation by seeking further funding or by cutting subscriptions.

A similar calculation is possible for new subscriptions. At the illustrated rate of inflation of 15% per year, a new title costing \$100.00 the first year will probably cost \$115.00 the second, \$132.25 the third, \$152.08 the fourth, and a startling \$174.89 the fifth year. Clearly, unless this increase is planned for, the library will have to find a total of \$74.89 from funds allocated for other purposes. The isolation and calculation of these figures allows the librarian to present a strong case for the discontinuance of those periodicals which have the greatest negative impact on acquisitions budgets, and the avoidance of subscriptions to potential trouble-makers. At Kearney State College, these figures were presented to faculty, tailored to the amount spent for each discipline, and the prevailing rate of inflation for each discipline. A rating scale of 1-5 was devised so that "important" titles could be identified by the faculty, and they were asked to rate titles in their discipline. A coorelation could then be made between relative importance to the faculty and long-term impact on the library budget, with an intention to drop those subscriptions which had either little significance to the faculty or had a great negative impact on the serials budget.

In another institution the relevant criterion might be usage, or a combined factor for usage and perceived importance, which would be a relatively simple matter to calculate using standard statistical methods and an electronic calculator. Such a decision-making model must be created in many situations to allow for future planning; if it is not, then the librarian will be trapped by inflationary increases in periodicals, and will be unable to make a choice of how to spend library funds---the choice will always be made for him by the simple fact of the faster-rising periodicals consuming funds which could be spent for other library materials.

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